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AN
INAUGURAL DISSERTATION
ON
THE DISEASES OF OLD AGE,
AS CONNECTED WITH
A PLETHORIC STATE
OF
THE SYSTEM.

BY JOHN SCUDDER, A. M.
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UNIVERSITY OF NEW-YORK.

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AN
INAUGURAL DISSERTATION
ON
THE DISEASES OF OLD AGE,
AS CONNECTED WITH
A PLETHORIC STATE OF THE SYSTEM:
SUBMITTED
TO THE PUBLIC EXAMINATION
OF THE
TRUSTEES OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF
THE UNIVERSITY OF THE STATE OF NEW-YORK,
SAMUEL BARD, M. D. PRESIDENT,
FOR
The Degree of Doctor of Medicine,
On the 2d day of May, 1815.

Mr. H. W. Duichacket

With the Respects
of the
Author

TO
JOSEPH SCUDDER, ESQ. A. M.

THIS
DISSERTATION IS INSCRIBED,

AS
A TESTIMONY

OF
THE HIGHEST ESTEEM AND GRATITUDE,

BY
HIS AFFECTIONATE SON.



TO
DR. SAMUEL FORMAN,

President of the New-Jersey Medical Society.

SIR,

HAVING commenced my medical education under your direction, permit me thus publicly to express my obligations as well for the instruction received while under your care as for the many marks of friendship you have manifested toward me.

With feelings of the highest respect

I am, &c.

JOHN SCUDDER.



TO
DAVID HOSACK, M. D.

*Professor of the Theory and Practice of Physic and Clinical Medicine in the
College of Physicians and Surgeons of the University of the
State of New-York, &c. &c.*

THIS
DISSERTATION IS DEDICATED,

WITH
SENTIMENTS OF THE HIGHEST RESPECT
FOR
HIS DISTINGUISHED TALENTS AND PRIVATE WORTH,
BY
HIS PUPIL,

JOHN SCUDDER.



TO
JOHN W. FRANCIS, M. D.

*Professor of Materia Medica in the College of Physicians and Surgeons of the
University of the State of New-York, &c. &c.*

THIS
DISSERTATION IS INSCRIBED,

IN
TESTIMONY

OF THE
REGARD AND FRIENDSHIP

OF
THE AUTHOR.

AN
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ON THE
DISEASES OF OLD AGE, &c.

THE discovery of the circulation of the blood is an era from which we may date a more rapid advancement in medical science than was ever effected from the time of HIPPOCRATES to that of HARVEY. During the long period intervening between the appearance of these distinguished characters, neither the ingenuity of anatomists, nor the speculations of physiologists tended to throw much light upon this important function of the animal economy ; and, as physicians were unacquainted with it, they could have no correct rules to guide them in fulfilling some of the most important indications of cure. The discovery

of HARVEY, by dispelling, in a great measure, the darkness which enveloped this part of anatomy, so far as it related to pathological knowledge, has rendered the science of medicine of greater utility to mankind, by augmenting the number, and rendering more certain, the principles of practice.

But notwithstanding the various improvements in the treatment of disease which have been consequent upon the discovery of the circulation, the fluids of the human body are sources of many disorders, the causes of which are too often overlooked, and which depend either upon an excess of the circulating mass, or upon certain changes which it may have undergone; circumstances which may take place equally in old age as in early life.

That plethora is a disease of advanced life, is positively denied by the generality of practitioners, and the lancet as dogmatically proscribed. Evacuations at this period, say they, are absolutely and altogether improper; and were we guided by their arguments, we would necessarily believe such persons rather the subjects of

inanition than otherwise. But this is generally far from being the case, for "although the system may be debilitated by age, it should be recollected that the secretions are also impaired from diminished exercise at that period of life, and that an accumulation takes place in the larger vessels, especially in the venous system."*

In addition to this, the degree of appetite which belongs to old age, the quality of the food taken, and the sedentary habit which is generally connected with it, all concur to produce that state of the system which requires blood letting; and again this "increase of appetite in old people, their inability to use sufficient exercise, whereby the blood vessels become relaxed, plethoric, and excitable, and, above all, the translation of the strength of the muscles to the arteries, and of plethora to the veins, all indicate bleeding to be more necessary in equal circumstances in old than in middle-aged people.†

* Vide HOSACK and FRANCIS' Amer. Med. and Philos. Register, vol. 4.

† RUSH'S INQUIRIES, vol. 1.

It is supposed that the veins in youth are stronger than the arteries; but that the latter, in consequence of the distention and pressure they undergo from the action of the heart, become of increased strength and thickness, and even more dense than the veins themselves. Hence venous plethora more particularly takes place, as is manifested by the appearance of the veins, which become larger, more relaxed, and, consequently, more replete with blood, as persons advance in life.

In addition to the reasons mentioned we may observe, that in advanced life, the symptoms of plethora are particularly manifested by an inordinate pulsation in the arteries, dulness, disinclination to motion, propensity to sleep, by a heavy disagreeable weight, and sense of stricture about the præcordia. The extreme vessels frequently become reddened; cephalalgia, an inability to articulate distinctly, numbness in the extremities, dizziness, and vertigo take place. The pulse is "sometimes strong and hard; but more frequently obscure or oppressed, and often

apparently weak and low:"* but if we have recourse to the method recommended by Mr. BROMFIELD, of applying four fingers to it, and suddenly raising them all except the one next to the patient's hand, the impulse given will convince us of its fulness, and point out the existence of plethora. The mind frequently participates in this diseased condition of the body; being unfit to direct itself to its ordinary pursuits. In consequence of the body being deprived of its accustomed exercise, and the excretions being diminished from the diminished action of the excretory vessels, obesity takes place, which is often followed by apoplexy, palsy, hydrothorax, ascites, and anasarca, which are only to be cured by early recourse to depletion, followed by tonics.

Females, after the cessation of the menses, are, *cæteris paribus*, more subject to plethora than the male sex; and if we do not have recourse to depletion when the symptoms, such as vertigo, numbness, and an oppressed state of the lungs, resembling asthma, indicate such plethora, a foundation will frequently be laid for

* DYCKMAN on the Pathology of the Human Fluids.

many of the diseases incident to old age. Their complaints at this time demand our particular attention, and more especially if there be the slightest predisposition to phthisis; as it is not an uncommon occurrence for the overloaded state of the blood vessels to vent itself upon the lungs. When this occurs blood letting will be proper, even when the condition of the system in other respects contra-indicates this remedy.

That plethora takes place in old age, is farther proved by persons at this period being more subject to gout than at any other time of life, this disease being rarely known to affect the young; and when it does, it arises from intemperance producing a plethoric state of the system. Gout has, by most physicians, been considered as independent of plethora; but the authorities of SYDENHAM, RUSH, and HAMILTON, (the last of whom, himself having been the subject of it, had a fair opportunity of witnessing the good effects of the plan he recommends,*) have set the

*Vide Letters on the causes and treatment of Gout. Also extracts from the work published in the Edinburgh Med. and Surg. Journal, vol. 6. p. 361.

question for ever at rest, and satisfactorily proved that it arises in ninety-nine cases out of a hundred, from this state of the system.

To the celebrated authorities just mentioned, I may here add that of my preceptor, Dr. Hosack, whose pathological reasoning on this subject, and the issue of the practice resulting therefrom, are strong corroborating circumstances in favour of the opinion, that gout is a disease of plethora.*

The causes of gout prove it to depend on plethora. It is rarely known to attack those in the humble walks of life, where a scanty pittance only is procured, and this by severe bodily exercise, the effect of which is to keep the excretions of the body constantly open. On the contrary, it affects those of sedentary habits; those who are indolent, who indulge freely in animal food, and the condiments of the table; and who, at the same time, partake largely of

* American Med. and Philos. Register, vol. 4. MS. notes on Hosack's Lectures on the Theory and Practice of Physic and Clinical Medicine, delivered in the University of the State of New-York.

spirituous and vinous liquors, particularly acid wines, which not only replete the blood vessels, but debilitate the system. It was owing to the use of the latter, that this disease was observed by SENNERTUS to be endemic in Moravia.*

Gout seldom attacks females who live temperately; and when it does, it usually appears after the cessation of the menses. This was particularly observed by HIPPOCRATES;† and this it might readily be anticipated would be the case, as by this discharge, that plethora, of the system, which takes place after its cessation, is prevented.

Gout is usually considered as a disease of debility, and doubtless debility is produced from the long continued plethora, which the application of fresh stimuli is constantly increasing. The equilibrium between the solids and fluids

* *Arthridem in Moravia esse endemiam, ob acrimoniam acidam et austeram hujus loci vinis, præ cæteris inditam: Tract. de Arthride, cap. 2.*

† *Γυνή οὐ ποδαργεῖα ἔν μὴ τὰ καταμήνια αὐτὴ ἐκλείπη. Aph. 29. sect. 6.*

is gradually destroyed, and the fluids being disproportioned to the strength of the solids, the disease vents itself upon the weakest parts, producing that violent pain and inflammation which always attend this affection. But this is no argument against the use of bloodletting; for this remedy, as remarked by Dr. RUSH, "is sometimes indicated in a larger quantity in weakly than in robust people, by the plethora which is more easily induced in their relaxed and yielding blood vessels. Thus it is more necessary to throw overboard a large part of the cargo of an old and leaky vessel in a storm, than of a new and strong one."

The termination of gout proves it to be a disease of plethora. When it goes off, after a short attack, the patient falls into a gentle sweat,* and this by relieving the surcharged vessels from their distention procures relief. WINTRINGHAM has attributed the ease procured, solely to the

* Sudores per cutis glandulas erumpunt, et placidus somnus ægro solatium, et quietum adducit. WINTRINGHAM, de Podagra, p. 6.

diminution of plethora in the part. “Glandularum omnium cutanearum orificia antea diminuta augebuntur, et larga materiæ perspirabilis copia ejicietur; unde diminuta quantitate liquidi in omnibus vasis ultimis, liberius per ea transibet liquidum, et canales non adeo infarciuntur, nec æquæ ultra tonum distendentur, et per consequens ulterius diminuetur dolor, et fiet remissio symptomatum, sive cessabit paroxysmus particularis.”*

Depositions of earthy matter also occur from the plethora of the blood vessels, and these to the greatest degree where the inflammation has been greatest, in consequence of the blood which abounds with this lithic matter, being there determined in such large quantities, and the thinner parts being carried away, while the thicker are left behind.

Gout also terminates in apoplexy, preceded, frequently, by oppression and swimming in the head, with other symptoms of fulness. VAN

* De Podagra, p. 109.

SWIETEN observes that he could fortel it by these symptoms.*

The method of preventing this disease also proves it to depend on plethora. This consists in abstinence from strong stimulants, confinement to a low diet, and keeping the different excretory vessels pervious. It is owing to a free perspiration that persons so generally escape the gout in the summer season; and if exercise be added, it gives tone to the system, and renders it less liable to a succeeding attack. VAN SWIETEN relates the case of a priest who had long suffered with gout, induced by a rich living which he enjoyed; but being taken by the pirates of Barbary and detained in a state of slavery for two years, and being obliged to work in the gallies with a very spare diet, he was completely and permanently cured.

The occasional use of bloodletting will also prevent this disease, and even in those who will not renounce their intemperate habits.†

Angina pectoris is a disease frequently oc-

* Commentaries on 1010 Aph. of BOERHAAVE.

† MS. Notes on HOSACK's Lectures.

curring in advanced life: it usually attacks those who have short necks, who are disposed to corpulency, and who, at the same time, are of inactive or sedentary habits. It is attended with great anxiety, giddiness, and numbness of the extremities, violent palpitations, laborious breathing, and a sense of suffocation, pain in the region of the breast and præcordia; all of which are symptoms of plethora. Dr. Hosack has remarked that all the cases of this disorder which have come under his notice, occurred to persons of a full condition of the blood vessels, and most generally in the advanced periods of life.

The morbid changes which manifest themselves upon inspection after death, also demonstrate, that plethora is the primary agent in the production of this disease. See Dr. BOGART'S Inaugural Dissertation on Angina Pectoris, and Dr. DYCKMAN'S learned and elaborate Dissertation on the Pathology of the Human Fluids.

Another concurring circumstance is that blood letting and other antiphlogistic means have, in many cases, removed this alarming complaint.*

* MS. Notes on Hosack's Lectures.

A strongly-marked instance of angina pectoris in a subject about sixty-five years of age, lately fell under the observation of Dr. FRANCIS; the paroxysms of which were uniformly removed by copious venesection and other antiphlogistic means.

Dropsy is a disease of frequent occurrence in old age, and is often dependent on increased exhalation, the effect of plethora, as is proved from the symptoms of the disorder and the state of the system preceding its formation; but we by no means pretend to say that it is always induced by this cause; on the contrary, it occasionally arises from diminished absorption, the consequence of the debility of the absorbents, and instead of depletion by the lancet, we must have recourse to stimulants and tonics.

Having, as I trust, shown, that the diseases which have been mentioned, arise frequently from a plethoric state of the system, and that plethora exists particularly in old age; I shall mention a few cases to prove that depletion, instead of being disadvantageous, has, in many instances, been attended with [the greatest

benefit, and has tended to prolong life. "I am sure," says Dr. RUSH, "that I have seen many of the chronic complaints of old people mitigated by blood letting, and I have more than once seen it used with obvious advantage in their inflammatory diseases."* Several instances of the good effects of bloodletting, are mentioned by him in persons far advanced in life, and from my own observation I have seen it repeatedly used with great success in similar cases. Many striking cases might here be mentioned, calculated, as I think, to lessen the influence of that too popular opinion, that the lancet ought not to be employed in persons of advanced age; an opinion the pernicious effects of which we have almost daily evidence in the numerous cases of sudden deaths which occur in our city from plethora, apoplexy, palsy, gout, &c. But two or three cases of this nature, which fully show the salutary effects of depletion, and which have recently occurred in the practice of the writer's preceptors, must suffice.

* RUSH'S INQUIRIES.

Dr. HOSACK relates the case of an old lady in the eighty-fifth year of her age, who, in the course of three days, lost by hemorrhage from the lungs, at the least calculation, two quarts of blood. Very nearly as much more was taken from her arm in the same period of time, when the hemorrhage ceased. She recovered without any injury to her constitution, from the loss of blood she sustained.”*

In an old lady above seventy years of age, lately under the care of Drs. HOSACK and FRANCIS, and who formerly had a discharge from her hemorrhoidal vessels, and had been subject to repeated attacks of apoplexy, in consequence of the cessation of this discharge, the lancet was used with the most decided success, even to the number of thirty times in a year. The consequence is, that she now enjoys a much better state of health than before, and the recurrence of her fits is far less frequent.

A gentleman of this city, a Mr. C., about sixty years old, was unable to lie down for nearly

* American Med. and Philos. Register, Vol. 3.

three months, owing to the accumulation of water in his chest, attended with cough, laborious respiration, and diminished secretion of urine, accompanied at the same time with a degree of anasarcaous swelling of the lower extremities: but by means of repeated bleeding, and the combination of calomel and squills, the symptoms above mentioned totally disappeared; and by the subsequent use of tonics, he so far recovered his strength, as to return to his usual active occupation.

In another case, in Dr. HOSACK's practice, a patient in his seventy-seventh year, of a plethoric habit of body, was attacked both with ascites and anasarca combined, attended with all the characteristic symptoms of those diseases. As these were induced from the want of exercise, the patient at the same time taking his customary food and stimulating drinks, the depleting treatment was deemed expedient. Fourteen ounces of blood were accordingly taken from the arm, followed with repeated doses of rhubarb and the sulphate of potash. During the use of these remedies, his usual drink, which

consisted of spirits or brandy and water, as well as the use of animal food, was continued, but in less quantity than ordinary. The tumor of the belly, and swelling of the extremities, were sensibly diminished by the evacuations procured, and by the subsequent use of chalybeates, and other tonics, his health was perfectly re-established.*

Having endeavoured to show that the diseases which have been mentioned, arise frequently from a plethoric state of the system, and that plethora exists, particularly in old age, I shall now endeavour to prove, that paralysis, which is generally considered as a disease of debility, also frequently arises from the same causes as the other diseases I have mentioned, and requires the same treatment.

Palsy is a disease occurring at every period of life, in the young and in the aged, but more generally in the latter, and is divided into three kinds: 1. Hemiplegia, where the whole of the muscles on one side of the body are affected.

* HOSACK'S Quarterly Report of the Diseases of the city of New-York. in *American Med. and Philos. Register*, vol. 2.

2. Paraplegia, where the lower half of the body only is affected.

3. Partialis, which usually affects the head and extremities, but is exclusively confined to no particular part.

With respect to paralysis, produced by the poison of mercury, lead, and arsenic, by pressure on the nerves, by tumors, by distortions of the spine, by the "thickening of the ligaments that connect the vertebræ together," by fractures and wounds, we shall make no observations. Our remarks will be confined more particularly to that kind which arises from plethora of the blood vessels, adding, at the same time, a few on that species which proceeds from debility.

Plethora producing palsy, arises from a variety of causes. In young persons of the sanguine temperament, where there is generally a large quantity of circulating fluids, the attack is frequent. In old age, those usually are the subjects of it who are fat, who indulge much in the use of animal food and stimulating drinks, and who are inactive in consequence of the torpor which arises from the surcharged state of

their blood vessels; this surcharged state causing such pressure as to destroy the action of the nerves, and produce paralysis. That this pressure does exist, the symptoms preceding an attack of palsy clearly manifest: these are numbness, coldness, sensations of tingling in the extremities, or of deadness in the flesh, numbness and vertigo, the last being much increased by stooping; a derangement of the faculties of the mind, memory, imagination, and judgment; a deprivation of feelings, to such a degree, as to render the patient insensible to the impression of external bodies; weakness, and disinclination to motion; a sense of stricture under the clavicles; loss of speech, hearing, seeing, and the other symptoms which we before mentioned.

The resemblance between apoplexy and palsy is so great, that these diseases have been classed under the same head. ARETÆUS observes, “Apoplexia paraplegia, paresis, paralysis omnia generè eadem sunt, aut enim motionis, aut tactus, aut utriusque, defectus est.”* VAN SWIETEN has

* De causis et signis Morb. duiturn. lib. 1. cap. 2. p. 33.

likewise observed, that "as an apoplexy is a cessation of all voluntary motion, it may be considered as a kind of general palsy."* They proceed from the same cause, are usually confined to the same period of life, are preceded by the same symptoms, and affect the same constitutions: "Hemiplegia," says CULLEN, "usually begins with, or follows a paroxysm of apoplexy; and when the hemiplegia, after subsisting for some time becomes fatal, it is commonly by passing again into a state of apoplexy."†

From this great similarity between the two diseases, occasional remarks will be made on apoplexy, and should any particular causes of the latter be mentioned, they are to be considered as applicable to palsy.

Palsy often arises from the suppression of accustomed discharges. The case of apoplexy which was formerly mentioned, arose from an accustomed hemorrhoidal discharge being stopped. BOERHAAVE observes, that "a palsy may

* Comment. on 1059. Aph. of BOERHAAVE.

† CULLEN'S First Lines.

have for its cause an apoplexy, a retention of the hemorrhoids, and menstrua;”* and it is not an uncommon occurrence for this disorder to supervene, when long continued ulcers are dried up; when the system, from being deprived of its customary discharges, becomes plethoric. A very valuable life was not long since lost by the imprudent stoppage of a discharge from an ulcer which had existed for many years.† Facts of this kind have long since been noticed; and it has been recommended as a preventive, very properly, to substitute a discharge elsewhere.

Eruptive diseases often occur at the decline of life, under a variety of circumstances: they are affections which we cannot repel with impunity, as they frequently are connected with a plethoric state of the system.

The celebrated Dr. LETTSOM supposes that even as simple a disease as “the prurigo podicis, may be considered as a preventive of other diseases, having observed many persons after various long indispositions relieved by its appear-

* Aph. 1060.

† MS. Notes on HOSACK's Lectures.

ance;" doubtless by removing the plethora which existed. "A gentleman sixty-eight years of age," he observes, "who had long laboured under a disorder of the chest, attended with a weak and intermitting pulse, was perfectly relieved from these symptoms by the prurigo podicis. A favourable termination of the same kind happened in the case of a person who had been for upwards of three months affected with vertigo, and other strong symptoms of approaching apoplexy." He relates the case of "another patient who was relieved in the same manner, after having been much debilitated by frequent fits of the gout; but imprudently endeavouring to allay the troublesome sensation of itching, by a strong saturnine solution; he, after having applied it a few days, suddenly expired in his chair."*

Women, after the cessation of the menses, are liable to be affected with a species of prurigo, more especially in summer or autumn. "The skin between the nates is rough, papulated, and

* Vide Memoirs of the Med. Society of London, vol. 3.
Also, WILLAN on Cutaneous Diseases, p. 92.

sometimes scaly. With this complaint there is often an itching papulous eruption on the neck, breast, and back, a swelling and inflammation of the ears, with a discharge of matter from behind them, and from the external meatus auditorius." By repelling such eruptions the greatest danger is incurred of producing apoplexy, palsy, and other diseases, as they generally, though not always, arise from a plethoric state of the system, and are efforts of nature to relieve herself. When we recollect that fatal consequences, palsies, severe head-achs, loss of sight, and epileptic fits, have proceeded from the removal of that cutaneous inflammation which so often affects the face, we should be extremely cautious in removing those of greater magnitude, unless we substitute a discharge in some other part of the body, as an outlet to the superfluous mass of fluids.

Palsy sometimes comes on instantaneously, without any previous warning, and deprives the patient of motion and sensation. At other times

* WILLAN ON Cutaneous Diseases.

it is preceded by those general symptoms of fullness which have already been mentioned. When the head is much affected, the eye and mouth are drawn to one side, the memory and judgment are impaired, and the speech is difficult and indistinct.

When a person is first attacked with palsy we must have immediate recourse to blood letting, if the disease has not been preceded by great debility, proportioning the discharge to the age, sex, habit, and temperament of the patient. The large evacuations to which some have recourse in apoplexy,* are equally improper here; for it should be remembered that the vessels are already weakened, torpid, and paralysed, from over distention, and that by subtracting too large

* In apoplexy we are directed to bleed *ad deliquium*; but it should be remembered that the brain has not the control of its vessels. There appears to be an extraordinary dilatation of the arteries, which large blood letting does not often diminish, as experience proves; for after bleeding to the utmost extent, the pulse has remained full. "Even in the most athletic habits, such sudden evacuations and consequent prostration of power of life, cannot be justified by reasoning or practice."

a quantity of blood, they are left in such a state of collapse and inaction, that recovery afterwards is frequently impossible.*

The pulse in this disease is sometimes perfectly natural, sometimes full, frequent, and jerking, without tension. In either case we are to bleed freely.

Dr. THOMAS, in his chapter on this disease, condemns the use of the lancet in the strongest terms in advanced life, confining it exclusively to the young and plethoric: "When this disease," he observes, "arises in a young person of a plethoric habit, comes on suddenly, and the head appears to be much affected, or seems to arise from the causes producing apoplexy, it will be advisable to take away some blood; but in old age neither bleeding nor purging should be

* The same observation may be made respecting blood-letting during pregnancy, when abortion is threatened. By taking away a sufficient quantity to remove the oppressed state of vascular action, when plethora is present, our attempts to prevent abortion will be frequently successful: but by bleeding immoderately, such a degree of relaxation is produced, that we effect the very object dreaded.

resorted to. Where costiveness prevails in such habits, it may be avoided by some stomachic laxative, such as the *tinctura rhabarb. composita*.”* Even if it were allowed that blood letting was generally improper in the paralysis of advanced life, we ought by no means to proscribe it altogether, as cases occur where fatal consequences may immediately result from neglecting to have recourse to it. Should we follow the above directions, though the vessels be overloaded with blood, though the symptoms be such as to predict a state of apoplexy, we are not to bleed; but resort to stimulants which are calculated to replete the vessels still more, and to add greatly to the disease.

It is to be regretted that the science of medicine, which, next to religion, is the noblest, and most calculated to benefit mankind, should ever be disgraced by the spirit of dogmatism, and especially where there is no reasonable ground upon which it may be justified. Experience has proved that blood letting in old age is not only useful, but absolutely necessary; and the dread-

* Modern Practice of Physic.

ful consequences we have witnessed from the neglect of it, have made an impression upon our minds, which the unwarranted assertions of a few individuals can never efface.

On the first attack of paralysis, as has been before said, we should resort to blood letting. This practice has been sanctioned by the respectable authority of HUNTER, who remarks, that in palsy "we ought to bleed at once very largely, till the patient begins to show signs of recovery, and to continue it till he might begin to become faintish."* That this evacuation is serviceable, is proved by the manner in which nature sometimes cures the disease, which is by discharges from the bowels. Dr. THOMAS himself has observed that it is sometimes cured by a diarrhoea; BOERHAAVE, that nature has cured the disease by carrying it off by a plentiful and long-continued diarrhoea; and VAN SWIETEN, that a plentiful, and long-continued diarrhoea carries off the "morbific matter."† From the salutary ef-

* See Treatise on the Blood, part 2. chap. 1.

† Commentaries on BOERHAAVE.

forts of nature, important instruction is to be obtained, as they teach us to imitate her operations. VAN SWIETEN has observed "that physic is never of greater service to mankind, than when it can follow the footsteps of nature in the cure of diseases:" and, again, "it has frequently been remarked before, in describing the cure of diseases, that prudent physicians ought to consider, with the greatest attention possible, those salutary attempts of nature, by which the most obstinate diseases are sometimes cured; and these being observed and understood, they ought to attempt to imitate by art those things which, happening spontaneously, they observe to be of service."

As palsy is a disease so alarming in its consequences, it is of the utmost importance to prevent it, if possible, whenever the premonitory symptoms point out its approach. These, it may be repeated, are numbness of the extremities, vertigo, affections of the mind, &c. "Observavi in pluribus," says WILLIS, "quod cum cerebro primum indisposito mentis hebetudine, et oblivione, et deinde stupiditate et *μαρasmus* affice-

rentur postea in paralyisin, (quod etiam prædicere solebam) incidebant.”* Even the numbness of one of the fingers points out an attack. Dr. Hosack relates the case of a lady who was affected with this partial paralysis, while at her piano, and first became sensible of it by an inability to use her finger. Had she not been bled, in all probability it would have terminated either in complete paralysis, or in the loss of the functions of the part.

In all such cases, by the prudent use of the lancet, we may generally prevent the disease; and experience having proved its utility, we have no hesitation in recommending it.

The following cases, selected from many others of a similar kind, as they tend to establish the correctness of the doctrines advanced, and are immediately in point, it may not be amiss to insert.

* De Paralyxi, p. 145.

I.

EDWARD SWAIN, aged seventy-four, of the phlegmatic temperament, was, some time since, attacked with fever, accompanied with pain, for which he was bled six times. After having recovered he came into the Alms-House, where he had a renewal of his fever, and was again repeatedly bled. Some time afterwards he felt a numbness in his left side, extending down to his ankle, with dizziness and vertigo in his head, accompanied with the loss of smelling and taste. His taste was so much impaired that, to use his own expression, he "could not tell a tablespoon of salt from one of sugar." His complaint caused him frequently to fall. He was on the stimulating treatment when he came under my care; from which receiving no benefit, he was bled twenty ounces, and was cured of the dizziness and numbness in his head. Not receiving relief for the numbness in his extremity, the carb. ammon. and other stimulants, both externally and internally, were resorted to. He has since recovered so far as to leave the house.

II.

JOSEPH MILLER, aged seventy-three, feels considerable numbness in his head, and is unable to articulate distinctly, is feeble, and cannot walk as well as usual. His mind appears to partake of the diseased condition of the body, being incapacitated to perform its proper functions. Let him be bled. Bleeding has entirely relieved him, and he is as well as formerly.

III.

C. WILLIAMS, aged forty-eight, has felt a general numbness for some time past, which he attributes to his having caught cold. The physician, whom he consulted, notwithstanding he was afflicted with the sick headach, was flighty, and sometimes in danger of falling when not supported, condemned the lancet in the strongest terms, asserting that he had no blood to lose; that he rather wanted blood than otherwise. He came into the Alms-House with diarrhoea,

(caused, in all probability, by plethora,) and was prescribed for with little benefit. Complaining of numbness, and a sense of deadness in his flesh, I proposed blood letting, to which he assented. Next morning, to use his own expression, "he felt like another man;" his numbness being completely removed. The diarrhoea was soon cured.

IV.

ANN HORNEKE, aged thirty-four, has laboured under a discharge from her bowels for several weeks, and taken various remedies without effect. She complains of vertiginous affection of the head, numbness of the arms and feet, with an oppressive weight about her breast, palpitation, fluttering, and such a degree of weakness as to be unable to walk. She was bled freely, which proved of material service, as it considerably removed her weakness, doubtless by removing that oppressed state of action, from the relaxed condition of the system which existed, and restoring the equilibrium between the solids and fluids. Soon afterwards, again feeling numbness, blood

letting was resorted to with advantage, and she soon recovered.*

The same principles which direct us in our recourse to blood letting, lead also to the administration of purgatives: even in the most debilitated habits, the bowels must always be kept open. BOERHAAVE laid particular stress upon purging, doubtless being led to it, by observing the manner in which nature sometimes carried off the disease; and experience must have proved to him, during his extensive practice, that they were among the most valuable remedies. He recommends the strong hydragogue purges in large doses, and repeated several times successively; by means of which a plentiful and lasting diar-

* Sometimes blood letting will not permanently relieve the numbness and fulness in the head, which are among the worst of the premonitory symptoms of palsy. In such cases we should endeavour to make a determination elsewhere, by the constant exhibition of purgative medicines, and if piles can be produced, in all probability, relief will be obtained. Blisters should be applied behind the ears, and issues in the arms, for the same purpose.

rhœa may be produced.* In what cases they may be given to the extent here recommended, the physician's judgment must direct; certain it is, that in many habits they will prove valuable auxiliaries to the lancet, in promoting the cure.†

But the remedy vastly superior to all others after blood letting, is friction. The utility of friction has long since been noticed, and certainly it is the most powerful restorative of that action to the nerves, which was lost by the over-distention and plethora of the blood vessels. The good effects of this remedy were noticed particularly by CELSUS, who observes that when a limb has become paralytic, it is strengthened by friction,‡ and even when the limb is wasted, it will be good, "ad alendum id, quod tenue et infirmum est."§

* Aphorism, 1068.

† A valuable paper by Dr. SHERRILL, on the efficacy of blood letting and cathartics in this disease, may be found in the 14th volume of the Medical Repository, p. 35.

‡ *Membrum aliquod resolutum, ipsius frictione confirmatur.* Lib. 2. cap. 14.

§ *Lib. 2. cap. 14.*

Notwithstanding friction was strongly recommended, it never has been employed with the assiduity and attention required. Its success is in proportion to its early use, and by immediate recourse to it, our exertions, if sufficiently long persisted in, will almost invariably terminate in the restoration of the parts to which it is applied. It was remarked to me by a gentleman, who resided some length of time in the Alms-House in this city, that with the exception of one, all the cases of paralysis occurring to him, while there, were effectually cured by this remedy; and of these there were only two who were not restored in the space of two hours. In many of these the cure was perfected without recourse to the lancet.

Various external applications have been recommended for the purpose of restoring paralytic parts. CELSUS ordered, in addition to friction, fretting the skin, or whipping it with nettles, the application of mustard seed,* and resin-

* Prodest etiam torpentis membri summam cutem exasperasse, vel urticis cæsam, vel imposito sinapi, sic ut, ubi rubere cœperit corpus hæc removeantur. Lib. 3. cap. 27.

ous plasters. GALEN made use of pricking for the purpose of attracting the blood in greater quantity to the part.* For the same purpose the *επιχειρῶσις*, or beating, was used, this being performed by small light rods, well oiled, with which they beat the wasted part, till it began to grow red and swell. But the most powerful remedy made use of was the whipping with nettles, by which palsy was sometimes suddenly and perfectly cured. ALPINUS affirms that the Egyptians had even attempted the cure of apoplexy, palsy, and epilepsy, successfully by burning.†

From these different remedies which have been mentioned, we may conclude the utility of stimulants to paralyzed parts; but it is not necessary to have recourse to a great variety. The flesh-brush, occasionally impregnated with aq. ammoniæ, flowers of mustard, or cowage, will answer the purpose.

* Method. Medendi, lib. 14. cap. 16.

† Med. Egyptior. lib. 3. cap. 12.

The friction must steadily be persisted in, until we can perceive its good effects, and for this purpose a number of assistants should be present to relieve each other, whose efforts are to be continued, notwithstanding they may create such pain to the patient, that humanity would incline us to desist. The pain of a few hours is more than counterbalanced by the good effects which result from it; as we are enabled to rescue the unhappy victim from the most abject state in which human nature can exist. The deplorable condition of the paralytic can be best realized in those public charities, where they are usually to be met with in great numbers, and where they are doomed to drag out their lives, not only with the loss of the functions of the body, but frequently with derangement of the faculties of the mind.

The following case, which was furnished me by my friend, Dr. SCHENCK, points out the utility of friction, and the surprising manner in which paralytic parts have their action restored by this remedy.

“BETSEY LAWRENCE, aged twenty-two, was at-

tacked with hemiplegia. After blood letting, frictions were resorted to, by means of a stiff brush applied to the affected parts, and in one hour the parts on which the frictions were diligently employed, were restored. At first her sensibility was so far lost, that the prick of a pin excited no sensation whatever. In fifteen minutes after the brushes were applied, she complained of pain in her arm, and requested us to desist, as it became intolerable. She could then raise to her head that arm which before hung motionless by her side. Her fingers, and especially the extremities of them, still remained insensible, which, however, were restored by a few vigorous applications of the brush. In the same manner her lower extremity was recovered; but not so quickly, as from motives of delicacy, she would not permit the frictions to be employed by her male attendants, and their continuance devolving upon the females, they did not employ them with as much diligence and assiduity as the case required. A blister was afterwards applied to the wrist and another to the ankle, to

keep up the irritation. She has since remained entirely free from any paralytic affection."

If our endeavours to restore patients by these means prove unsuccessful, we are by no means to conclude their condition hopeless. On the contrary, it will be proper to keep up a constant excitement both by the internal and external use of stimulants. The internal, most generally in use, are mustard seed, horse radish, ammonia, and others of this kind. The volatile tincture of guaiac has been attended with great advantage in the practice of Dr. HOSACK. The external are horse radish, mustard,* garlic, blisters, urtication, electricity, (the latter being sometimes of material service, and frequently attended with very happy effects,) galvanism, and friction, with different stimulating liniments, all of

* The external application of mustard seems calculated to do much good, as it makes a very powerful impression upon the system, and creates even a much greater degree of irritation than blisters. See JACKSON'S Dissertation on External Applications, in CALDWELL'S Collection.

which are to be had recourse to at different times, when one or the other fails.

The operation of internal stimulants upon the system is to be carefully watched, and occasionally the lancet interposed in some habits, where there is a great disposition to the regeneration of plethora, and where the symptoms of it are manifested, otherwise they will produce the very object they were intended to obviate.

Warm bathing is often an important auxiliary in the cure of paralysis; but the indiscriminate use of it is altogether unjustifiable. When the disease proceeds from a plethoric state of the system, or has the marks of plethora without previous blood letting, it is calculated to do much injury by the expansion which it necessarily must produce. Its principal use appears to be in cases from worn-out excitement, as sometimes occurs in the advanced stages of disease: but it should never be used without the addition of brandy, aq. ammoniæ, or some other strong stimulant. The cold bath in some cases where it can be borne, is very useful, as by its

stimulating effects it imparts tone to the system, and thus removes the disease.

Diaphoretics form a valuable class of remedies, and may be administered with the greatest benefit in every stage of the disease; but different kinds must be used according to the cause of the complaint.

Exercise is a very important remedy, and where it is not altogether impracticable, it should never be neglected. Nothing is calculated to restore lost action to paralytic parts sooner; as, in addition to the good effects of motion, perspiration is constantly kept up by the excretory vessels being kept in a pervious state. Flannel should always be worn next the skin.

In palsy of long standing, the occasional use of blood letting, when the symptoms of plethora exist, will be absolutely necessary. By neglecting it the patient will be threatened with the most imminent danger of being carried off by an apoplexy, or complete palsy. A case of hemiplegia, of several years continuance, was under my care some time since, where the overloaded state of the blood vessels was manifested by numbness,

oppression at the breast, and languor of the intellectual powers: by blood letting, the patient was completely relieved. Had I improperly had recourse to stimulants in this case, in all probability, fatal consequences would have been produced.

Palsy from debility, seldom or never occurs in persons in good health, no matter at what age it takes place: it generally arises in the advanced stages of disease, when the excitement of the system has been worn out, and usually appears in the form of partial paralysis. It also may occur in persons not affected with a fullness of the vessels, who are weak and languid, and whose digestive powers are impaired, in whom blood letting might be productive of injury. In these cases, by restoring tone to the system by means of nourishing diet, wine, porter, iron, and other tonics, the disease may be permanently cured.

It remains, lastly, to make a few observations on the partial palsies, which are usually confined to the head and extremities. We will, however, mention those only affecting the optic

and auditory nerves, both of which are sometimes produced by plethora. The first is divided into two kinds, which are differently named according to the degrees of blindness produced. When there is a diminution, or total loss of sight, the disease is called amaurosis; and when the powers of vision are merely deficient at night, it is called nyctalopia. That plethora produces this disease, it is reasonable to suppose from the anatomy of the parts involved in the affection.

The only difference between amaurosis and nyctalopia appears, at least in many instances, to be in the degree of plethora which exists: in the former it is so great as completely to paralyze the nerve, and render it insensible to any impression; and in the latter, being so light as not to impair vision during the day, in consequence of the stimulus of light, more than counterbalancing the effects produced by the compression; but at night this stimulus being, in a great measure, withdrawn, and what little there is being disproportioned to the pressure, vision is totally obscured.

The treatment of these two diseases, when

arising from plethora, consist in blood letting, blistering, purging, small alterative doses of mercury, &c. In the second stage, stimulants, both general and local, will be absolutely necessary. Mr. WARE mentions the Cayenne pepper as a powerful stimulant in such cases.

The following case points out the utility of blood letting in nyctalopia.

BETSEY BOWERS, aged thirty-four, had nyctalopia for some time, in consequence, no doubt, of the retention of her menstrual discharge, as she was not afflicted in this manner before. Being of a delicate habit of body, and her pulse natural, there were apparently no symptoms which called for the lancet; but supposing her loss of sight to arise from pressure on the nerve, in consequence of the plethora of the vessels of the part, I bled her largely, and applied blisters behind her ears. From this treatment she received signal relief, as vision at night began to be more distinct. She continued to see alternately better and worse, but relapsing entirely, or nearly so, she was again bled. The relaxation produced by the

blood letting, brought on a profuse flow of her menses, and after this evacuation, she could see as well as previously to her attack. This affection of her vision continued nearly four weeks, when she again relapsed; but on the re-appearance of her menses, her sight was again restored, and has since remained good.

This practice does not accord with the recommendation of Dr. THOMAS. "Evacuation," he observes, "both by bleeding and purging, has been recommended by such writers as have taken notice of this disorder; but as it is supposed to depend upon a relaxed state of the optic nerves, or retina, these remedies appear to be improper, and those we employ ought to be such as will strengthen the tone of the parts." That it may sometimes depend upon the relaxed state of the nerve, upon pressure by tumours, and the like, we will not deny; but that plethora is sometimes the cause, the above-mentioned case proves.

Palsy of the auditory nerve also arises from plethora, as is proved by the following case:

JANE BENNIE, aged forty-six, of the nervous

temperament, was, on the fourth of February last, attacked with numbness of half the body. She was unable to raise the affected arm to the top of her head, and was totally deprived of the sense of hearing on that side. In this way she continued until the eighth, when consenting to be bled, I took away a large quantity, and before the orifice was closed, her hearing was perfectly restored. Her numbness and coldness, which existed without relief from warm applications, were soon completely cured, and she has since remained well.

Having finished our observations on the diseases of old age, as connected with a plethoric state of the system, it remains only to make a few remarks on the means of preventing this plethora, as there are few states of the system in which irritability is so troublesome. "Plethora occurs chiefly in the luxurious female whose pampered appetite prepares a superabundance of blood, whose distensible vessels yield with little resistance, and whose secretions from inactivity are slow and inconsiderable. The lax habits, which in weak resistance approach the female,

equally suffer, and the phlegmatic temperaments are also overwhelmed by a load of fluids."* The pulse frequently gives an imperfect idea of the cause. It is often apparently weak; but by having recourse to the method recommended by Mr. BROMFIELD, as before mentioned, we may frequently detect it. When this fails, our opinion is to be formed from other circumstances. "To relieve plethora," the learned Dr. PARR observes, "is very difficult; bleeding, sometimes attended with a little temporary relief, is occasionally followed by fainting; and after a little time the former fulness, and the debility with the irritability are increased. Evacuations by stool, and a more feeble diet occasion faintness, and exercise produces great fatigue. No other plans, however, will succeed, and each must be used in such a gradual guarded manner, as to prevent uneasiness. At first a meal may be lessened, soon after abridged. A feeble diet, feeble in its alimentary powers, must be slowly substituted; and the exercise, at first in a carriage,

* PARR'S Med. Diet. Art. Plethora.

must afterwards be supplied by the horse. After the vessels have been in part emptied in this way, tonics, or the cold bath may be safely used."

I shall conclude by again adverting to the propriety, utility, and absolute necessity of blood letting in the diseases of advanced life when connected with plethora. Experience has again and again taught us, that numerous diseases of this period of life are relieved by it, and therefore we have no hesitation in recommending it. "I have nothing to say upon the diseases of old people," says Dr. RUSH, "but what is to be found in most of our books of medicine, except to recommend bleeding in those of them which are attended with plethora, and an inflammatory action in the pulse." "Experience proves it to be more necessary under equal circumstances in that stage of life than in any other."*

* For some very valuable remarks on the plethora of advanced life, the excellent Inaugural Dissertation of Dr. DYCKMAN, on the Human Fluids, may be consulted with advantage.